

F. J. KENNY.
Portable Ranges.

No. 153,900.

Patented Aug. 11, 1874.

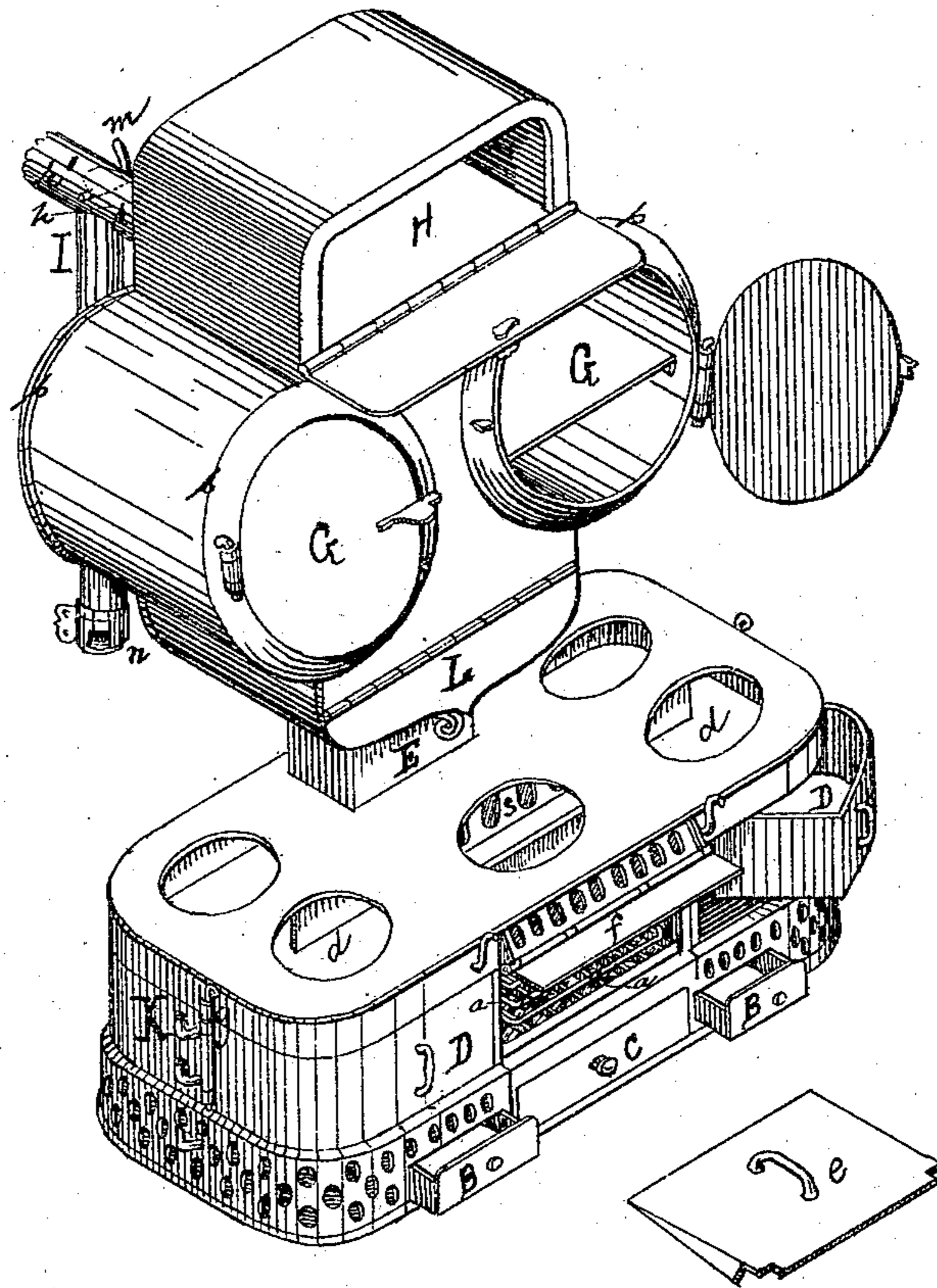


FIG. 1.

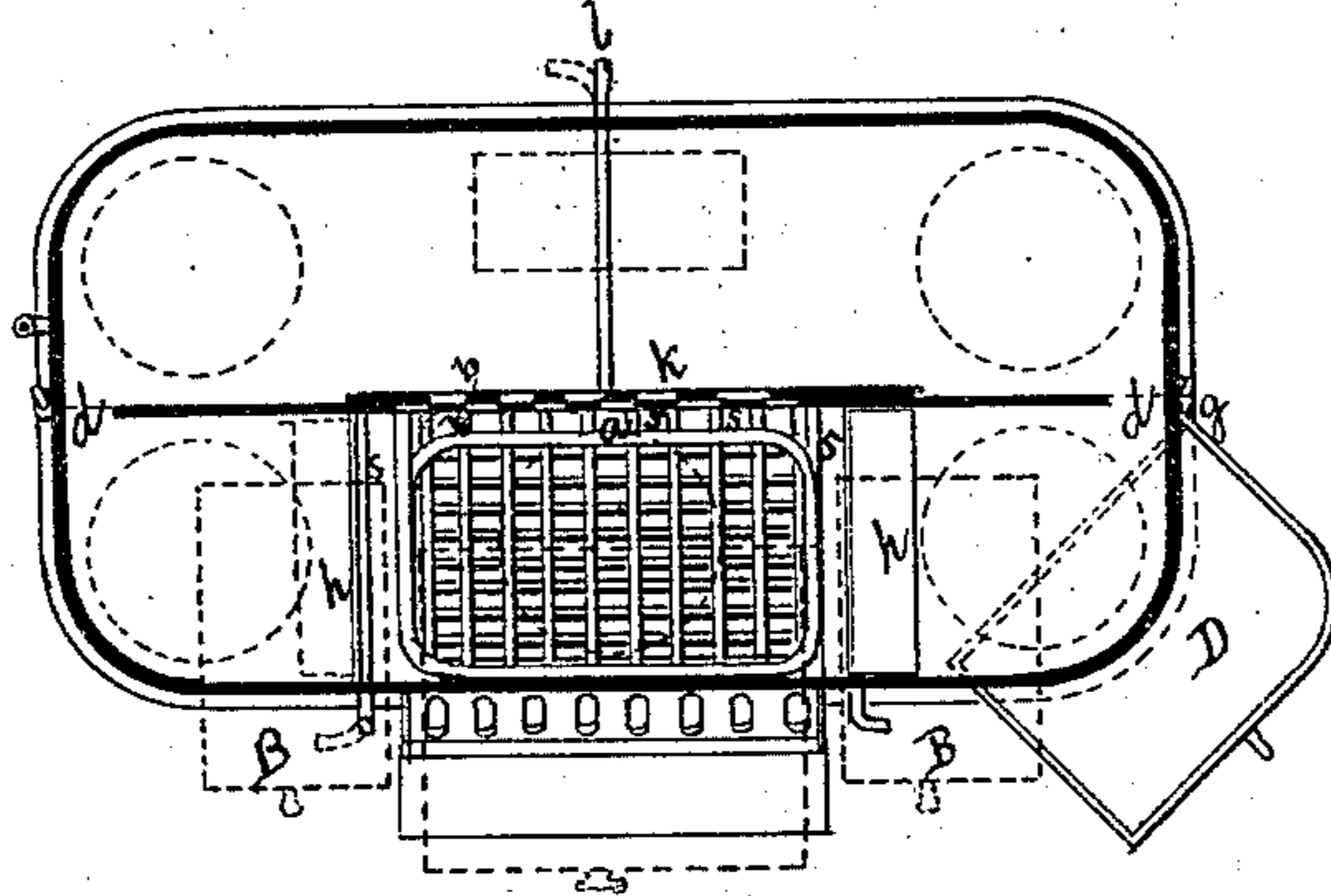


FIG. 2.

Shaw & Sons
F. J. Raymond } WITNESSES.

Fredrick J. Kenny INVENTOR.

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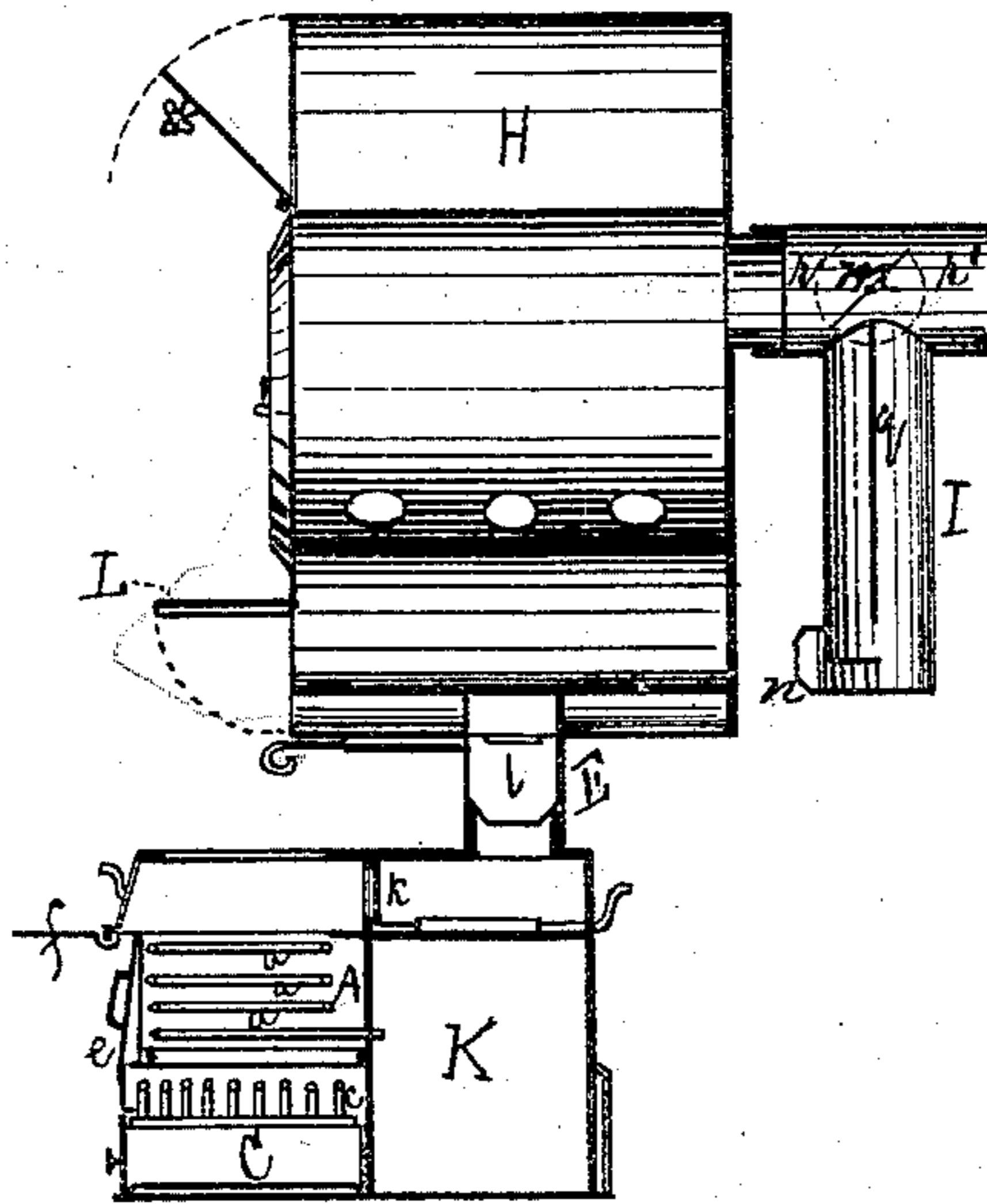


FIG. 3.

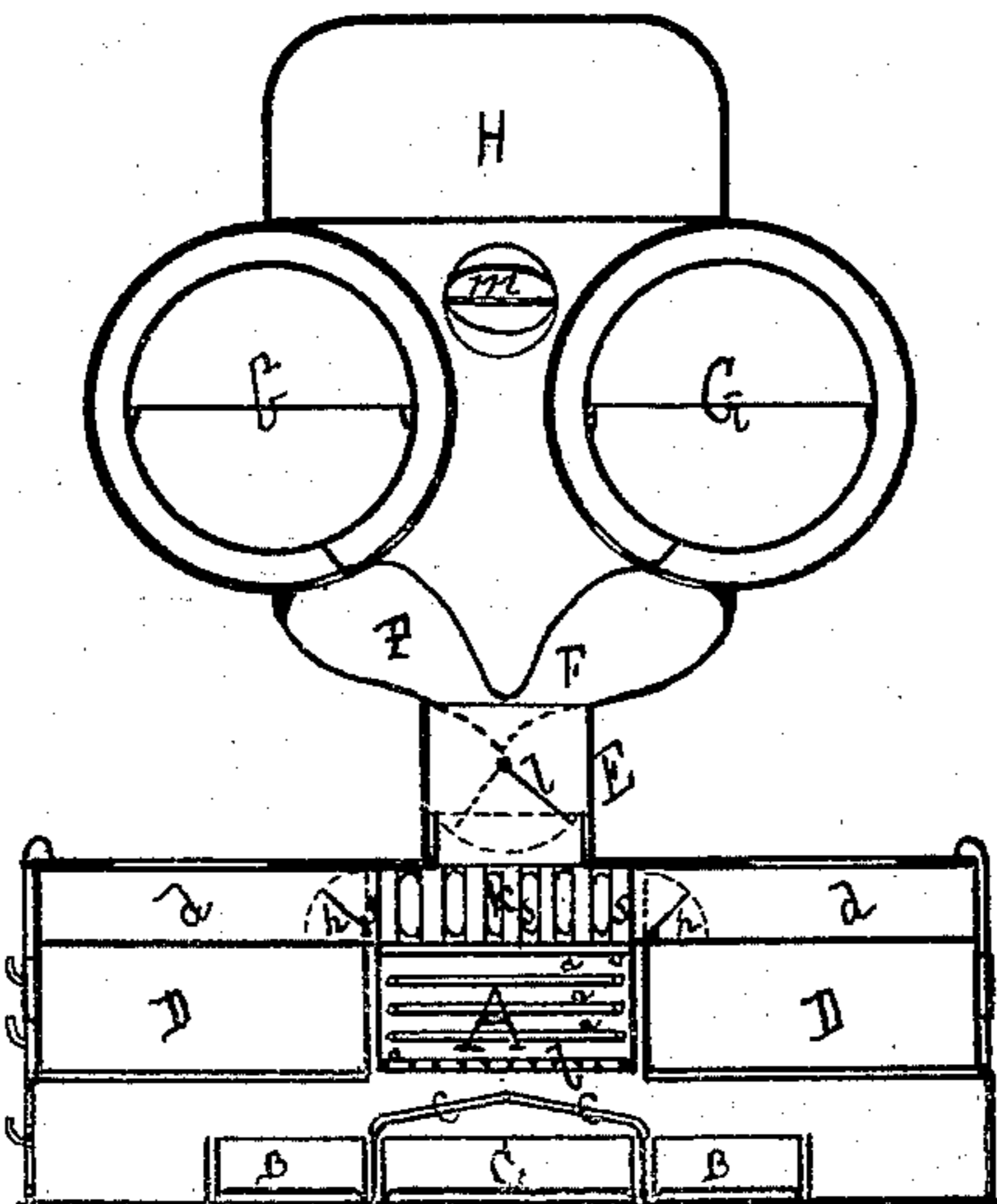


FIG. 4.

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UNITED STATES PATENT OFFICE.

FREDRICK J. KENNY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PORTABLE RANGES.

Specification forming part of Letters Patent No. **153,900**, dated August 11, 1874; application filed September 3, 1873.

To all whom it may concern:

Be it known that I, FREDRICK J. KENNY, of Boston, Massachusetts, have invented Improvements in Portable Ranges, of which the following is a specification:

This invention relates to the class of stoves known to the trade as portable ranges.

Like letters indicate like parts in all the drawings.

Figure I is a perspective view of the range. Figs. II, III, and IV are sectional views of the same.

A is the fire-pot, surrounded by coil-pipe *a*; *b*, the grate forming the bottom of the fire-pot. *c* is the sifting-grate. B B are the coal-boxes. C is the ash pit or box; D D, the water-heaters; *d*, the flues under the pot-holes; *e*, the blower; *f*, the damper in front of upper part of fire-box; *g*, the hinges of the water-heaters; *h*, the side dampers; *k*, the back damper; *l*, damper which controls the flow of the products of combustion in the exit-passage; E, the uptake; F, the enlargement of the uptake; G G, the ovens; H, the hot-closet; I, the draft-regulator; *m*, the draft-damper; *n*, slide closing the opening in the regulator I; K, the water-back. *p* is the ledge around the outside of the ovens to receive the lagging. *q* is the partial partition of the draft-regulator. *r* and *r'* are the parts of the funnel leading to the chimney on each side of the regulator.

The stove or range may be considered in two parts—the base or lower division, containing the fire-pot A, ash and coal boxes B and C, hot-water tanks K and D, and flues under the pot-holes *d*; and the upper part or division, which includes the ovens G, hot-closet H, and regulator I. The base or lower part of the range is built with the fire-pot A in the center of the front half, a coiled water-pipe, *a*, connected with water-back K, surrounding and forming the sides. The bottom is a sliding removable grate, *b*, resting on ledges on the side of the fire-pot. Underneath this grate is a hip-grate, *c*, with its center higher than the ends, the grate-bars sloping from the center to the coal-boxes B B arranged on either side. The ashes from the fire fall on the inclined grate-surfaces *c*, and the fine ashes sift into the ash-pit C, and the coal slides down on either side into the coal-boxes B B placed

to receive it, and which, as well as the ash-receiver C, are arranged as drawers. The front of the stove is made as a blower, *e*, closing the lower part of the fire-pot. Above this is a door suspended by hinges, and which opens outward and downward, and forms a top damper, *f*. Adjoining the fire-pot on each side, and forming the two front corners of the stove below the pot-flues *d*, are two reservoirs, D, for hot water, which are hung upon hinges *g* at the sides of the stove, and can be swung upon said hinges outwardly, so that their contents can be reached from the front or ends of the range, as may be desired. On each side and at the back of the fire-pot are dampers *h* and *k*, placed to regulate the passage of the heat to the side or pot flues *d* and to the uptake E. The back damper *k* is generally closed when boiling is going on, and the side dampers *h* when a hot quick oven is desired. Each of these dampers has a coal-guard, *s*, on the fire-pot side. The entire back of the lower division, below the pot-flues *d*, is a hot-water tank or reservoir, K, the water being heated by passing through the coil-pipes *a* that surround the fire-pot, and by direct contact of the fire with the plate of the water-back. This reservoir K is of sufficient size to answer all the purposes of the ordinary boiler or hot-water tank used with ranges. The uptake E runs to the flues surrounding the two circular or oval ovens G, which are made of single sheets of sheet-iron, and removable from the surrounding frame, if desirable. Above the uptake the flue is divided into two parts, each passing completely around the cylindrical ovens G as a single-sheet flue, and uniting again just above the point of separation. The ovens are formed with a ledge at the edges *p*, which may be lagged to prevent radiation. In the uptake E is a damper, *l*, by which the heat can be completely turned off from one oven, if desired. The ovens G are made cylindrical or oval, and surrounded by single-sheet flues, leading first outward and upward, then upward and inward, then inward and downward. From the upper end of the uptake E the smoke-passage enlarges into two chambers, F, one on each side. These communicate with the smoke passages or flues around the ovens G. Through a door, L, in

the front the ashes and soot which communicate in these chambers may be removed. Immediately above the ovens G is the hot-closet H.

The draft-regulator herein shown and described is not claimed, it being the subject of a separate application.

I claim and desire to secure by Letters Patent—

1. The combination of the fire-pot A, sliding grate *b*, sifting-grate *c*, ash-pit C, and coal-boxes B, in the manner and for the purposes set forth.

2. The hinged water-reservoirs D at the sides or forward corners of the range, com-

bined with the fire-pot A and flues *d*, in the manner and for the purposes set forth.

3. The uptake E, chambers F, damper *l*, and ovens G, having the single sheet flue, the several parts combined in the manner and for the purposes set forth.

4. The combination of the fire-pot A, coil-pipe *a*, water-tank K, flues *d*, with the hinged reservoirs D, substantially as and for the purposes set forth.

FREDRICK J. KENNY.

Witnesses:

THOS. WM. CLARKE,
F. F. RAYMOND.